

ENTRY IN
PART

MPER 714.16 (e) [R-2]

Amendments to the Claims

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This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claims 1 – 110 (cancelled)

111. (Previously presented) A semiconductor structure comprising:
a substrate including an insulator layer; and
a device layer disposed over the insulator layer, the device layer comprising at least one of strained Si, strained Si_{1-w}Ge_w, strained Ge, GaAs, AlAs, ZnSe, and InGaP.
112. (Previously presented) The structure of claim 111 wherein a surface of the structure has a root mean square surface roughness of less than about 11 nanometers.
113. (Previously presented) The structure of claim 111, further comprising:
a device integrated into at least a portion of the device layer.
114. (Previously presented) The semiconductor structure of claim 111, wherein the substrate comprises silicon.
115. (Previously presented) A semiconductor structure comprising:
a substrate comprising silicon;
an insulating layer disposed over the substrate; and
a relaxed Si_{1-y}Ge_y layer disposed over and in contact with the insulating later,
wherein a Ge concentration y of the relaxed later is selected from the range of greater than zero to 1.

116. (Canceled)

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Amendment after Notice of Allowance
U.S. Application Serial No. 10/802,185
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117. (Previously presented) The structure of claim 115 wherein the Ge concentration y has a value of 1.

118. (Previously presented) The structure of claim 115, further comprising:
a device disposed within at least a portion of the relaxed $\text{Si}_{1-y}\text{Ge}_y$ layer.

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119. (New) The structure of claim 111, wherein the device layer comprises strained $\text{Si}_{1-w}\text{Ge}_w$.

120. (New) The structure of claim 111, wherein the device layer comprises strained Ge.

121. (New) The structure of claim 111, wherein the device layer comprises strained GaAs.

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122. (New) The structure of claim 111, wherein the device layer comprises strained InGaP.

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